LECTURERS' TECHNOLOGICAL INTEGRATION FOR CLASSROOM MANAGEMENT IN PUBLIC UNIVERSITIES IN DELTA STATE

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Abstract
The study examined lecturers' perception on technological integration for classroom management in public Universities in Delta State. Three research questions and three corresponding null hypotheses guided the study. The design of the study was descriptive survey. The population of the study was 2,821 lecturers comprising 1,645 male and 1,176 female out of which 620 lecturers comprising 322 male and 298 female were sampled for the study. Data for the study were collected using a 15 item questionnaire titled "Lecturers Technological Integration for Classroom Management Questionnaire" (LTICMQ). The instrument was validated by experts and the reliability index was estimated as 0.76 using Cronbach alpha statistics. The research questions raised were answered using mean and standard deviation while the hypotheses were tested using z-test statistics at 0.05 level of significance. The findings of the study showed that computers and microphones were integrated into classroom management while smart board and internet were not. It was also revealed that these technologies were majorly used for planning, students' assessment and monitoring. The challenges to the integration of these technologies included lack of technical know-how among teachers, power failure and lack of technological devices. It was therefore recommended that educational stakeholders should partner with these Universities in the provision of technological devices needed for classroom management in these Universities.

Keywords: Lecturers, Technological Integration, Classroom management, Public Universities

Introduction

The world today is regarded as a global village because of the ease of connection between people from different geographical locations. This is made possible by the expansion in the field of technology (Amini-Philips & Elijah, 2019). This development has been incorporated in the production of goods and delivery of services in different sectors of the economy and the field of education is not exempted in this application of technology for production of goods and delivery of services.

In the past, education as a social service delivery was carried out using traditional methods where students find it difficult to contribute in the instructional process. Similarly, learning was limited to resources available within the locality of the school. The teacher who is the instructional head of the classroom is limited to the resources within his classroom for the delivery of instruction. Furthermore, the teacher is limited in the availability of resources for managing the classroom in order to contribute to the achievement of the goals and objectives of education in the school.

The teacher plays a significant role in the management of any classroom no matter the level of education. Classroom management entails putting measures in place to ensure that all activities carried out in the classroom are carried out professionally for the achievement of

the goals and objectives of education. Sunday-Piaro (2018:949) stated that "classroom management is the action and direction a teacher takes to create a successful learning environment, having a positive impact on students' performance, given learning requirement and goals". It deals with adequate control over people vis-à-vis teachers and students in the classroom as well as educational materials in addition to creating the right atmosphere to ensure that meaningful teaching and learning activities are carried out in the classroom.

However, as a result of the expansion in technology, the teacher has been provided with different technological resources which make it easy for him to manage activities in the classroom. There is no better way to make the classroom more interactive than the use of technology which encourages inquiry, improves communication and assist in students' self-expression (Baek, Jung & Kim, 2008). Teachers now find it easy to teach, monitor students' progress, and carry out other co-curricular activities with the aid of available technological devices. Technological devices which the teacher has the opportunity of integrating in the management of the classroom include computers, projectors, microphones, magnetic board, PowerPoint packages as well as other audio-visual devices which are needed to keep the classroom under control and ensure that all the activities in the classroom are properly managed for educational goal attainment. Summarizing, Thieman (n.d.) pointed out that every school is expected to have technological devices for classroom management which should include: word processing software, internet, projector, DVD, CD player, graphic organizer, digital camera, computers among others. This will assist in the smooth management of the classroom by any teacher.

The need for integrating technology for classroom management is an issue that cannot be over-emphasized. Sharma (2017) pointed out that in this era of social media development; the use of technology for classroom management is on the increase. Adopting technology in the classroom cuts across all educational activities that take place in the classroom. Technology can be integrated into classroom management since these devices can be used to monitor the movement of students within and around the classroom. Similarly, technology plays a great role in the assessment of students' performance in the classroom. Technological integration is also relevant for classroom management as it can be used providing virtual learning where students' attention can be captured for interactive learning in and out of the classroom. Teachers also use available technological devices for classroom management by incorporating them into the planning of educational and other co-educational activities in the classroom. All of these are done to keep the development of the student in check and ensure adequate educational development among the students.

According to Elijah (2019), the integration of technology for classroom management by teachers in the Universities does not come without some form of challenges. As a developing nation, there are diverse infrastructural facilities that are needed in school in order to make it possible for technology to be integrated in the management of the classroom (Shehu & Hammad, 2013). Support infrastructural facilities such as functional computer laboratories with internet devices make it easy for technology to be integrated in the management of the classroom by teachers. The need for adequate power supply cannot be over-emphasized in the use of technology in the classroom which is power dependent. Similarly, the teacher must have the technical know-how in order to adopt technology for classroom management. This is in addition to the availability of adequate instructional time which is needed for making the use of technology for classroom management both efficient and effective. The social and cultural orientation of the students in the classroom can also affect the adoption of technology for classroom management. It is only when the teacher has all of these factors under control that he can properly integrate technology for the management of the classroom and achieved quality educational goals and objectives in the

long run. Okoro, Iseh and Ugwulebo (2017:74) also mentioned other challenges that may hinder the teacher from benefiting from the use of technology to include: corruption, inadequate man-power, storage and caring facilities, users' perception and characteristics, epileptic nature of power, community clashes/rivalries, lack of NGO's support, and inadequate security among others.

Statement of the Problem

The management of classroom activities in public Universities in Delta State has been a huge problem to lecturers in the face of increased students' enrollment and workload. This has made it difficult for lecturers to plan their regular activities and develop programmes that will contribute to actualization of educational goals and objectives. A closer look reveals that most of these lecturers are still attached to the traditional method of classroom management. This may explain why targets are not met and educational programmes properly implemented. This has necessitated an investigation into lecturers' technological integration for classroom management in public Universities in Delta State.

Research Questions

The following research questions were formulated to guide the study:

(i) What are the technologies integrated by lecturers for classroom management in public Universities in Delta State?
(ii) What are the ways in which technology is integrated by lecturers for classroom management in public Universities in Delta State?
(iii) What are the challenges in the integration of technology for classroom management in public Universities in Delta State?

Hypotheses

The following null hypotheses were tested in the study:

(i) There is no significant difference between male and female lecturers' perception on the technology integrated by them for classroom management in public Universities in Delta State
(ii) There is no significant difference between male and female lecturers' perception on the ways technology is integrated by them for classroom management in public Universities in Delta State
(iii) There is no significant difference between male and female lecturers' perception on the challenges in the integration of technology for classroom management in public Universities in Delta State

Methodology

The design adopted for the study was descriptive survey design. The population of the study comprised all the 2,821 lecturers (1,645 male and 1,176 female) out of which 620 lecturers (322 male and 298 female) were sampled for the study using the Taro Yamane formula through random sampling technique. The instrument used for collection of data was a 15-item questionnaire titled "Lecturers Technological Integration for Classroom Management Questionnaire" (LTICMQ). The instrument contained a four point modified Likert scale of Strongly Agreed (SA), Agreed (A), Disagreed (D) and Strongly Disagreed (SD) with weighted values of 4, 3, 2 and 1 respectively.

The instrument was validated by three experts; one in Measurement and Evaluation, one in Educational Technology and one in Educational Management. The average reliability of the questionnaire was determined using Cronbach Alpha with an index of 0.76. Data for the study was collected by the researcher and two trained Research Assistants. Research

questions raised were answered using mean and standard deviation while the hypotheses were tested using z-test at 0.05 level of significance.

Results

Research Question One: What are the technologies integrated by lecturers for classroom management in public Universities in Delta State?

Table 1: Mean and standard deviation scores on the technologies integrated by lecturers for classroom management in public Universities in Delta State

S/No	Items	Male Lecturers n=322			Female Lecturers n=298		
		Mean	**SD**	**Remark**	**Mean**	**SD**	**Remark**
1	Smart board is used for teaching and learning	2.35	0.93	Disagreed	2.26	0.97	Disagreed
2	Projector is used to display classroom instructions	2.56	0.90	Agreed	2.49	0.95	Disagreed
3	Microphones are used for class control	2.69	0.78	Agreed	3.14	0.79	Agreed
4	The internet is used for knowledge sharing	2.14	0.72	Disagreed	2.49	0.95	Disagreed
5	Computer is used for classroom interaction	3.01	0.61	Agreed	2.88	0.91	Agreed
	Average	**2.55**	**0.79**	**Agreed**	**2.65**	**0.91**	**Agreed**

Table 1 reveals that with an average mean score of 2.55 and 2.65, the female lecturers agreed more than the male lecturers on the technologies integrated for classroom management in public Universities in Delta State.

Research Question Two: What are the ways technology is integrated by lecturers for classroom management in public Universities in Delta State?

Table 2: Mean and standard deviation scores on the ways technology is integrated by lecturers for classroom management in public Universities in Delta State

S/No	Items	Male Lecturers n=322			Female Lecturers n=298		
		Mean	**SD**	**Remark**	**Mean**	**SD**	**Remark**
6	Technology is used for planning co-curricular activities such as Microsoft packages	2.91	0.59	Agreed	2.78	0.86	Agreed
7	Collaborative learning is carried out using technological devices such as projectors	2.80	0.70	Agreed	2.38	1.07	Disagreed
8	Classroom	3.04	0.46	Agreed	2.77	0.75	Agreed

	assessment is conducted using ICT devices such as computers						
9	Technological devices are used for knowledge sharing in the classroom such as android and smart phones	2.03	0.73	Disagreed	1.18	0.63	Disagreed
10	Student activities in the classroom are monitored using technological devices such as CCTV	2.84	0.61	Agreed	2.87	0.85	Agreed
	Average	**2.72**	**0.62**	**Agreed**	**2.40**	**0.83**	**Disagreed**

In table 2, the male lecturers with average mean score of 2.72 agreed on the ways technology is integrated for classroom management while the female lecturers with average mean score of 2.40 agreed otherwise on the ways technology is integrated for classroom management in public Universities in Delta State.

Research Question Three: What are the challenges in the integration of technology for classroom management in public Universities in Delta State?

Table 3: Mean and standard deviation scores on the challenges in the integration of technology for classroom management in public Universities in Delta State

S/No	Items	Male Lecturers n=322			Female Lecturers n=298		
		Mean	**SD**	**Remark**	**Mean**	**SD**	**Remark**
11	Power failure limits the use of technology in the classroom	2.62	0.95	Agreed	2.67	0.93	Agreed
12	Lack of technological devices limit its use in the classroom	2.75	0.91	Agreed	2.74	0.78	Agreed
13	Lecturers lack of technical know-how hinders use of technology in the class	2.67	0.89	Agreed	2.91	0.35	Agreed
14	Time factor limits the use of technology in the classroom	2.73	0.66	Agreed	2.89	0.87	Agreed
15	Socio-cultural difference limits ICT usage in the class	2.99	0.74	Agreed	2.14	0.88	Disagreed
	Average	**2.75**	**0.83**	**Agreed**	**2.67**	**0.76**	**Agreed**

Table 3 shows the mean and standard deviation of lecturers' responses on the challenges in the integration of technology for classroom management in public Universities in Delta State. The table indicated that the average mean score of 2.75 from the male lecturers and 2.67 from the female lecturers indicated that they both agreed on the challenges to the integration of technology for classroom management in public Universities in Delta State.

Test of Hypotheses

Table 4: z-test analysis of the perception of male and female lecturers on the technology integrated for classroom management in public Universities in Delta State

Variable	n	Mean	SD	df	z-cal.	z-crit.	Level of Significance	Decision
Male Lecturers	322	2.55	0.79	618	1.47	1.96	0.05	Ho was not rejected
Female Lecturers	298	2.65	0.91					

In table 4, since the estimated z-cal. value of 1.47 was below the value of z-crit. of 1.96, the hypothesis was not rejected. Therefore, it was concluded that there was no significant difference between the mean opinion scores of male and female lecturers on the technology integrated by them for classroom management in public Universities in Delta State

Table 5: z-test analysis of the perception of male and female lecturers on the ways technology is integrated for classroom management in public Universities in Delta State

Variable	N	Mean	SD	df	z-cal.	z-crit.	Level of Significance	Decision
Male Lecturers	322	2.72	0.62	618	5.42	1.96	0.05	Ho was rejected
Female Lecturers	298	2.40	0.83					

In table 5, since the value of z-cal. of 5.42 was more than the value of z-crit. of 1.96, the hypothesis was rejected. This implied that there was a significant difference between the mean opinion scores of male and female lecturers on the ways technology is integrated by them for classroom management in public Universities in Delta State.

Table 6: z-test analysis of the perception of male and female lecturers on the challenges to the integration of technology for classroom management in public Universities in Delta State

Variable	N	Mean	SD	df	z-cal.	z-crit.	Level of Significance	Decision
Male Lecturers	322	2.75	0.83	618	1.27	1.96	0.05	Ho was not rejected
Female Lecturers	298	2.67	0.76					

In table 6, since the value of z-cal. of 1.27 was less than the value of z-crit. of 1.96, the hypothesis was not rejected. As such, it was concluded that there was no significant

difference between the mean opinion scores of male and female lecturers on the challenges to the integration of technology for classroom management in public Universities in Delta State

Discussion

The study revealed that microphones and computers are integrated into the management of the classroom in the sampled Universities. However, they disagreed on the use of smart board and internet for classroom management. The teachers also varied in their responses on the use of projector in classroom management. These observations are similar to the findings of the study conducted by Ajayi and Ekundayo (2009) where it was revealed that computer, radio, projectors, television sets, video, slides, films trips, electronic notice boards, internet, disc player and bulletin boards are scarcely available for classroom management in the sampled schools. This goes a long way to affect the quality of educational activities carried out in the classroom.

The inadequacy of technological devices makes it difficult for teachers to integrate them into the management of their classroom. However, there are situations where the teacher goes the extra mile to improvise or source for these devices in order to achieve efficiency and effectiveness in the management of the classroom. This may explain the difference in the opinion of the male and female lecturers sampled for the study on the integration of projectors for classroom management. Study conducted by Abdul-Salaam (2012) agreed with this position as it was revealed that in the school used for his study, computers, educational software for teaching, internet, interactive boards, television set, printers, photocopiers, multimedia facilities, projectors and virtual library differ in the quantity of availability in the sampled schools. This suggests the need for lecturers to learn to improvise or derive other alternatives of integrating technology into the management of their classroom as this has a lasting effect on the objectives of education that will be achieved.

There are different ways that technology can be integrated into the management of the classroom, for the attainment of the goals and objectives of education in any school system. According to the opinion of the lecturers sampled for the study, it was pointed out that ways technology is integrated into the management of classroom in the selected schools included planning of educational activities, students' assessment and monitoring of students' activities such as timing students' educational activities in the school. Durak and Aritepeci (2017) agreed otherwise with these ways of integrating technology into classroom management in the school when they reported in the findings of their study that no statistically significant difference was found in terms of effect levels of technology use by teachers in the classroom on classroom management. This may reveal why some lecturers still prefer to adopt the traditional approach to classroom management than the use of technology. However, the advantages of using technology such as speed, security of information and conservation of energy during work are eluded when these lecturers fail to integrate technology into the management of the classroom.

Furthermore, the lecturers used in the study disagreed that technology is integrated for knowledge sharing in the classroom where students and teachers can share vital information that are relevant for the quality of educational services in the classroom. Ghavifekr and Rosdy (2015) explained the implication of this as the findings of their study showed that ICT integration has a great effectiveness for both teachers and the students. It was further revealed that teachers' well-equipped preparation with ICT tools and facilities is one the main factors in success of technology-based teaching and learning. However, then these technologies are not harmonized adequately and appropriately, both the teacher and the students will miss out from its relevance. It therefore appears that these lecturers do not integrate these technologies adequately in ways that will enable them interact properly with

their students and this can have a far reaching negative implication on the achievement of educational goals and objectives.

Lecturers face different challenges in their move to integrate technology into the management of their classroom especially in public Universities where the population of students is usually high. According to the opinion of the lecturers sampled for this study, they agreed that the problem of power supply, inadequacy of technological devices, lack of technical know-how as well as time factor are some of the challenges they face when integrating technology into the management of the classroom. This is why Atabek (2019) reported in the findings of his study that it is not only the hardware itself that constitute obstacles to technology integration in schools, problems such as insufficiency of in-service and pre-service training, content support, and incentive system, were seen as challenges to technology integration for classroom management. In addition to this, there is also the problem of inadequacy of physical and technological infrastructure which makes it difficult for lecturers who wish to integrate technology into the management of their classroom to go ahead and do so.

There was however difference in the opinion of the male and female lecturers on whether the socio-cultural differences in the classroom pose a challenge to the integration of technology into the management of the classroom. Soleimani and Razmjoo (2016) however clarified this situation when they pointed out that behavioral and psychological differences also pose a challenge to the integration of technology for classroom management. Teachers therefore have a huge responsibility in ensuring that they integrate an environmental friendly technology into the classroom that will help to ensure that the interest of all students are protected for the efficient and effective management of the classroom.

Conclusion

The study revealed that teachers in public Universities in Delta State do not adequately integrate technology into classroom management. This may be as a result of the shortage of technological devices in these schools which limits the ability of the teacher to utilize them for teaching and learning activities in the classroom.

Recommendations

The following recommendations were made based on the findings of the study:

(i) Educational stakeholders should support public Universities in the state by either donating or partnering with these Universities in the provision of required technological devices which will make classroom management easy for the teachers and other school personnel for the purpose of achieving better educational outcomes.

(ii) Teachers need to be trained and re-trained on how to integrate available technological devices for meaningful teaching and learning activities in the school. This will help to promote professionalism and competence among the teachers and the students.

(iii) The school administrators need to invest in facilities and equipment that will make it easy for technology to be integrated in classroom management in these Universities. This will help ensure that the goals and objectives of the Universities are achieved.

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